

AMENDMENT TO THE SPECIFICATION

Kindly amend the specification at page 11, line 7, through page 12, line 9, as follows:

Pluripotent mesenchymal cells derived from UCB can be administered directly and induced to differentiate by contact with tissue *in vivo* or induced to differentiate into a desired cell type, e.g., mesenchymal cells, hematopoietic cells, neural cells, or endothelial cells, etc., using *in vitro* or *ex vivo* methods before their administration. Such predisposition of progeny of pluripotent mesenchymal cells derived from UCB has the potential to shorten the time required for complete differentiation once the cells have been administered to the patient. Techniques for the differentiation of pluripotent cells into cells of a particular phenotype are known in the art, such as those described in U.S. Patent Nos. 5,486,359; 5,591,625; 5,736,396; 5,811,094; 5,827,740; 5,837,539; 5,908,782; 5,908,784; 5,942,225; 5,965,436; 6,010,696; 6,022,540; 6,087,113; 5,858,390; 5,804,446; 5,846,796; 5,654,186; 6,054,121; 5,827,735; and 5,906,934, which describe the transformation of pluripotent cells. For example, Rodgers *et al.* (U.S. Patent No. 6,335,195), describes methods for the *ex vivo* culturing of hematopoietic and mesenchymal pluripotent cells and the induction of lineage-specific cell proliferation and differentiation by growth in the presence of angiotensinogen, angiotensin I (AI), AI analogues, AI fragments and analogues thereof, angiotensin II (AII), AII analogues, AII fragments or analogues thereof, or AII AT₂-type 2 receptor agonists, either alone or in combination with other growth factors and cytokines. In an embodiment, the pluripotent cells of the invention can be induced *in vitro* to differentiate into pancreatic cells, and in particular pancreatic islet cells, by using, e.g., techniques known in the art (see, e.g., Yang *et al.*, *Proc. Nat. Acad. Sci. USA* 99: 8078-83, 2002; Zulewski *et al.*, *Diabetes* 50: 521-33, 2001; and Bonner-Weir *et al.*, *Proc. Nat. Acad. Sci. USA* 97: 7999-8004, ~~2000~~2001). Art-known techniques can also be used to induce the pluripotent cells of the invention to differentiate *in vitro* into hepatic cells (see, e.g., Lee *et al.*, *Hepatology* 40: 1275-1284, 2004), neuronal cells (see, e.g., Thondreau *et al.*, *Differentiation* 319-322-326, 2004), or endothelial cells (see, e.g., Kassem *et al.*, *Basic Clin. Pharmacol. & Toxicol.* 95:209-214, 2004; and Pittenger and Martin, *Circ. Res.* 95:9-20, 2004). Optionally, a differentiating

agent may be co-administered or subsequently administered to the subject to promote stem cell differentiation *in vivo*.